

CLAIM AMENDMENTS

1-26. (canceled)

27. (new) A method of manufacturing a tank suitable for storing very cold cryogenic liquids, such as liquefied ethylene (LEG) or natural gas (LNG) or a corresponding medium, the tank comprising at least one self-supporting volume unit defining an internal space and having a basic form corresponding to a rectangular prism having a first side opposite a third side and a second side opposite a fourth side, the method comprising:

providing first mechanically extruded aluminum profile elements each having a plane part and a stiffening part extending essentially perpendicular to the plane part and having a free distal end relative to the plane part,

forming an intermediate element by attaching the first profile elements to each other by their plane parts using friction welding,

providing second mechanically extruded aluminum profile elements,

forming a stiffener by attaching the second profile elements to each other by friction welding,

attaching the stiffener to the intermediate element to form a first plane element,

providing at least second, third and fourth plane elements each having at least one stiffener attached thereto, and

attaching the first, second, third and fourth plane elements to each other to form respective sides of said self-supporting volume unit,

and wherein the stiffeners attached to the plane elements extend only partly through the internal space of the volume unit between opposite sides thereof.

28. (new) A method according to claim 27, wherein the step of attaching the first, second, third and fourth plane elements to each other comprises attaching the first and second plane elements to each other through a first edge element, the second and third plane elements to each other through a second edge element, the third and fourth plane elements to each other through a third edge element, and the fourth and first plane elements to each other through a fourth edge element.

29. (new) A method according to claim 28, comprising making the edge elements by providing rolled plate and bending the rolled plate.

30. (new) A method according to claim 28, wherein the volume unit has a fifth side that is perpendicular to the first, second, third and fourth sides, the step of attaching the first, second, third and fourth plane elements to each other forms an intermediate component of the volume unit, and the method comprises providing a fifth plane element having at least one stiffener attached thereto and attaching the fifth plane element to the intermediate component through edge elements and corner elements.

31. (new) A method according to claim 30, comprising making the edge and corner elements by providing rolled plate and bending the rolled plate.

32. (new) A method according to claim 27, wherein the step of providing the second, third and fourth plane elements comprises, for each of said second, third and fourth plane elements:

providing first mechanically extruded aluminum profile elements each having a plane part and a stiffening part extending essentially perpendicular to the plane part and having a free distal end relative to the plane part,

forming an intermediate element by attaching the first profile elements to each other by their plane parts using friction welding,

providing second mechanically extruded aluminum profile elements,

forming a stiffener by attaching the second profile elements to each other by friction welding, and

attaching the stiffener to said intermediate element to form said plane element.

33. (new) A method according to claim 27, comprising connecting said one volume unit to at least one other volume unit to form the tank, the tank having a basic form corresponding to a rectangular prism.

34. (new) A method according to claim 33, wherein said other volume unit has a basic form corresponding to a rectangular prism having a first side opposite a third side, a second side opposite a fourth side, and a fifth side perpendicular to the first, second, third and fourth sides.

35. (new) A method according to claim 33, wherein the tank further comprises a splash bulkhead located between the one volume unit and said other volume unit and formed with openings connecting adjacent volume units, and the method comprises forming the splash bulkhead by providing mechanically extruded aluminum profile elements and attaching the profile elements to each other by friction welding.

36. (new) A method according to claim 35, wherein the splash bulkhead is about 16 x 16 meters in size.

37. (new) A method according to claim 27, comprising machining the plane elements to predetermined dimensions and beveling ends of the plane elements and the profile elements to produce a welding groove.

38. (new) A method according to claim 27, wherein the first mechanically extruded aluminum profile elements are symmetrical relative to a plane normal to the plane part and the stiffening part is T-shaped or I-shaped in cross-section.

39. (new) A method according to claim 27, wherein the plane elements are each about 16 x 16 meters in size.

40. (new) A tank suitable for storing very cold cryogenic liquids, such as liquefied ethylene (LEG) or natural gas (LNG) or a corresponding medium, the tank comprising at least one self-supporting volume unit having a basic form corresponding to a rectangular

prism having a first side opposite a third side and a second side opposite a fourth side, the volume unit comprising:

a first plane element comprising an intermediate element and a stiffener, wherein the intermediate element comprises first mechanically extruded aluminum profile elements each having a plane part and a stiffening part extending essentially perpendicular to the plane part and having a free distal end relative to the plane part, the first profile elements being attached to each other by friction welding their plane parts, the stiffener comprises second mechanically extruded aluminum profile elements attached to each other by friction welding, and the stiffener is attached to the intermediate element,

at least second, third and fourth plane elements each including at least one stiffener, and wherein the first, second, third and fourth plane elements are attached to each other to form respective sides of said self-supporting volume unit, and the stiffeners of the plane elements extend only partly through the internal space of the volume unit between opposite sides thereof.

41. (new) A tank according to claim 40, wherein the first and second plane elements are attached to each other through a first edge element, the second and third plane elements are attached to each other through a second edge element, the third and fourth plane elements are attached to each other through a third edge element, and the fourth and first plane elements are attached to each other through a fourth edge element.

42. (new) A tank according to claim 40, wherein the volume unit has a fifth side that is perpendicular to the first, second, third and fourth sides, and the tank comprises a fifth plane element attached to the first, second, third and fourth plane elements through edge elements and corner elements.

43. (new) A tank according to claim 40, comprising at least two volume units connected together, the tank having a basic form corresponding to a rectangular prism.

44. (new) A tank according to claim 40, further comprising a splash bulkhead located between the two volume units and formed with openings connecting adjacent volume units.

45. (new) A tank according to claim 40, wherein the tank is provided with means for filling and emptying the tank.

46. (new) A tank according to claim 40, wherein the first mechanically extruded aluminum profile elements are symmetrical relative to a plane normal to the plane part and the stiffening part is T-shaped or I-shaped in cross-section.

47. (new) A self-supporting volume unit for fabrication of a tank, the volume unit having a basic form corresponding to a rectangular prism having a first side opposite a third side and a second side opposite a fourth side, the volume unit comprising:

a first plane element comprising an intermediate element and a stiffener, wherein the intermediate element comprises first mechanically extruded aluminum profile elements each having a plane part and a stiffening part extending essentially perpendicular to the plane part and having a free distal end relative to the plane part, the first profile elements being attached to each other by friction welding their plane parts, the stiffener comprises second mechanically extruded aluminum profile elements attached to each other by friction welding, and the stiffener is attached to the intermediate element,

at least second, third and fourth plane elements each including at least one stiffener, and wherein the first, second, third and fourth plane elements are attached to each other to form respective sides of said self-supporting volume unit, and the stiffeners of the plane elements extend only partly through the internal space of the volume unit between opposite sides thereof.